

CLAIMS

What is claimed is:

1. A controller located in a peripheral device capable of engaging in data communications with a host over a power line, the controller comprising:
 - a power line interface capable of providing a first data communications interface between the peripheral device and the host over the power line;
 - an interface controller coupled to the power line interface, the interface controller configured to connect the peripheral device with the host over the power line interface using the first data communications interface and a second data communications interface coupled to the interface controller and the peripheral device and having a protocol associated with the data communications; and
 - a power supply coupled to the power line and the second data communications interface for supplying power associated with the second data communications interface;

wherein the controller, in connection with information associated with the data communications received from the power line interface directed to the peripheral device, is configured to appear to the peripheral device as the host in accordance with the protocol and wherein the power supply supplies power to the second data communications interface in accordance with the protocol such that the second data communications interface is fully compliant with the protocol.
2. The controller according to claim 1, wherein the first data communications interface includes a HomePlug Powerline interface.
3. The controller according to claim 1, wherein the second data communications interface includes a Universal Serial Bus (USB) interface and the protocol includes a USB protocol.

25

P1981US00

4. The controller according to claim 3, wherein the protocol includes a USB protocol according to at least one of: USB revision 1.1, and USB revision 2.0.

5. A controller located in a host capable of engaging in data communications with a peripheral device over a power line, the controller comprising:

a power line interface capable of providing a first data communications interface between the host and the peripheral device over the power line;

10 an interface controller coupled to the power line interface, the interface controller configured to connect the host with the peripheral device over the power line interface using the first data communications interface and a second data communications interface coupled to the interface controller and the host and having a protocol associated with the data communications; and

15 a power supply coupled to the power line and the second data communications interface for supplying power associated with the second data communications interface;

20 wherein the controller, in connection with information associated with the data communications received from the power line interface directed to the host, is configured to appear to the host as the peripheral device in accordance with the protocol and wherein the power supply supplies power to the second data communications interface in accordance with the protocol such that the second data communications interface is fully compliant with the protocol.

6. The controller according to claim 5, wherein the first data communications interface includes a HomePlug Powerline interface.

7. The controller according to claim 5, wherein the second data communications interface includes a Universal Serial Bus (USB) interface and the protocol includes a USB protocol.

8. The controller according to claim 7, wherein the protocol includes a USB protocol according to at least one of: USB revision 1.1, and USB revision 2.0.

5 9. A peripheral device capable of engaging in data communications with a host over a power line, the peripheral device comprising:

a power line interface capable of providing a first data communications interface between the peripheral device and the host over the power line;

10 a controller coupled to the power line interface, the controller configured to connect the peripheral device with the host over the power line interface using the first data communications interface and a second data communications interface coupled to the controller and the peripheral device and having a protocol associated with the data communications; and

15 a power supply coupled to the power line and the second data communications interface for supplying power associated with the second data communications interface;

20 wherein the controller, in connection with information associated with the data communications received from the power line interface directed to the peripheral device, is configured to appear to the peripheral device as the host in accordance with the protocol and wherein the power supply supplies power to the second data communications interface in accordance with the protocol such that the second data communications interface is fully compliant with the protocol.

25 10. The peripheral device according to claim 9, wherein the first data communications interface includes a HomePlug Powerline interface.

11. The peripheral device according to claim 9, wherein the protocol includes a Universal Serial Bus (USB) protocol.

12. The peripheral device according to claim 11, wherein the protocol includes a Universal Serial Bus (USB) protocol according to at least one of: USB revision 1.1, and USB revision 2.0.

5 13. A host capable of engaging in data communications with a peripheral device over a power line, the host comprising:

 a power line interface capable of providing a first data communications interface between the host and the peripheral device over the power line;

10 a controller coupled to the power line interface, the controller configured to connect the host with the peripheral device over the power line interface using the first data communications interface and a second data communications interface coupled to the controller and the peripheral device and having a protocol associated with the data communications; and

15 a power supply coupled to the power line and the second data communications interface for supplying power associated with the second data communications interface;

 wherein the controller, in connection with information associated with the data communications received from the power line interface directed to the host, is configured to appear to the host as the peripheral device in accordance with the protocol and wherein the power supply supplies power to the second data communications interface in accordance with the protocol such that the second data communications interface is fully compliant with the protocol.

20 14. The peripheral device according to claim 13, wherein the first data communications interface includes a HomePlug Powerline interface.

25 15. The peripheral device according to claim 13, wherein the protocol includes a Universal Serial Bus (USB) protocol.

16. The peripheral device according to claim 15, wherein the protocol includes a Universal Serial Bus (USB) protocol according to at least one of: USB revision 1.1, and USB revision 2.0.

5 17. A controller for facilitating data communications between a host and a peripheral device over a power line, the controller comprising:

 a power line interface capable of providing a first data communications interface for the data communications between the controller and one of: the host when the controller is located in the peripheral device, and the peripheral device when
10 the controller is located in the host, over the power line using a wall plug capable of electrically connecting to the power line; and

 a port interface capable of providing a second data communications interface for the data communications between the controller and the host when the controller is located in the host, and the peripheral device when the controller is located in the
15 peripheral device, the second data communications interface proceeding in accordance with a protocol associated with the data communications,

 wherein the controller, in connection with the second data communications interface, is configured to: appear to the host as the peripheral device when the controller is located in the host, and to the peripheral device as the host when the
20 controller is located in the peripheral device.

18. The controller according to claim 17, wherein the first data communications interface includes a HomePlug Powerline interface.

25 19. The controller according to claim 17, wherein the protocol includes a Universal Serial Bus (USB) protocol.

 20. The controller according to claim 19, wherein the protocol includes a Universal Serial Bus (USB) protocol according to at least one of: USB revision 1.1,

and USB revision 2.0.

5